

Development of Textbooks Oriented to Higher Order Thinking Skills Based on Local Wisdom

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Abstract. This study aims to investigate the viability of HOTS-oriented theme textbooks based on indigenous knowledge to enhance the efficacy of Kindergarten education in Jepara Regency. Using the Research and Development (R and D) technique, themed textbooks based on HOTS-oriented local knowledge are developed. In this study, data was collected by observation, interviews, questionnaires, and tests. The approach for data analysis included descriptive analysis and a two-group difference test (independent sample t-test). The outcomes demonstrated that HOTS-oriented thematic textbooks based on local knowledge were deemed viable and usable. This is evident from the expert validation, which indicates that instructors and students have provided positive feedback.

Keywords: textbook; thematic; local wisdom; HOTS; elementary school

1 Introduction

Thematic learning is an integrated learning paradigm that uses themes to link many courses in order to offer students with meaningful experiences [1]. At the point of application in learning, there is a lack of availability of suitable books for use in learning. As a result, textbooks cannot be used optimally in learning [1].

In teaching and learning interactions, it is not only necessary for a teacher and students, but also a learning tool is needed. Media and teaching materials are essential because they make it easier for students to understand concepts. This is what underlies the need to develop teaching materials and complementary book media that support learning materials [2]. One of the teaching media that must be used in schools is student books. The better the quality of student books, the more perfect the teaching of subjects supported by student books, including thematic learning[3].

The problem of textbooks, especially student books on thematic learning, is still an obstacle for teachers in providing teaching. As Wardani, Sunardi&Suharno [4] explained, the main problem that arises is from the textbooks used. In the 2013 curriculum material, the government has not provided student books on local wisdom in the student's living environment, especially in Jepara Regency. As a result, students can less understand and know various kinds of local cultural wisdom around them. At the same time, some basic competencies in grade IV require students to understand their local wisdom.

Local wisdom around the school can be integrated with the modules used in learning. Combining modules with local wisdom will produce modules based on local wisdom that will make students more interested in learning and learning meaningfully[5]. The situation analysis

and initial observations in Grade IV of State Elementary School 2 Banyuputih, Jepara Regency, show that there is no thematic learning device following the theme in the surrounding environment. So often, students have not been able to complete assignments and have not been able to independently broaden their horizons by reading books on Jepara local wisdom related to thematic learning on the theme of the area where I live.

The use of local wisdom-based textbooks can be a solution for teachers to attract students' interest in learning; learning with textbooks integrated with local wisdom allows students to learn directly from the surrounding environment to create contextual and meaningful learning for them [6]. Textbooks effectively influence student activity and learning outcomes and make it easier to achieve the desired learning objectives. Therefore, student books for every learning activity should be created to facilitate students' active participation in learning activities and to enhance students' reasoning ability and higher-order thinking skills [7]. Regarding higher-order thinking skills, Fajriyah [8] asserts that higher-order thinking skills are a priority at the basic education level in order to generate competent graduates. The curriculum should emphasize higher-order thinking abilities in order to prepare pupils for global issues.

The International Examination of Reading and Literacy (PIRLS) reveals that more than 95 percent of Indonesian fourth-grade primary school children cannot attain the advanced level. TIMSS (Trends in International Mathematics and Science Study) reveals that Indonesian students rank very poorly in their capacity to (1) comprehend complicated material, (2) theory, analysis, and problem-solving, (3) utilize tools, processes, and problem-solving, and (4) conduct an inquiry [9]. On this basis, HOTS is essential for enhancing kids' cognitive abilities, particularly those of fourth-grade primary pupils.

The phenomenon still occurs that teachers in learning activities do not emphasize higher-order thinking skills. Learning is still primarily focused on delivering material based on predetermined targets. For this reason, educators should lead education that emphasizes developing students' potential by increasing higher-order thinking skills (HOTS) with varied learning. One of the teachings that can support improving *higher-order thinking skills* (HOTS) is to integrate them into thematic education in elementary schools. Developing teaching materials that can improve students' HOTS is very necessary. Teachers' teaching materials must follow the 2013 Curriculum guidelines, which can enhance students' thinking skills at high-level HOTS [10].

2 Introduction

This research utilizes Sugiyono's [13] research and development model, which consists of ten steps: (1) Potential and problems, (2) Data collection, (3) Product design, (4) Design validation, (5) Design revisions, (6) Product trials, (7) Product revisions, (8) Usage trials, (9) Product revisions, and (10) Mass production. Based on the aforementioned ten phases, the researcher implements seven stages, namely the first stage to the seventh stage, in constructing themed textbooks for fourth-grade primary school pupils in Jepara Regency based on HOTS-oriented local wisdom. This study's data sources include material specialists, media specialists, teachers, and students.

3 Findings and Discussions

The preliminary study results show that the teaching materials used for fourth-grade elementary school students in Jepara Regency are still using the 2013 Curriculum thematic textbooks published by the Ministry of Education and Culture. Textbook materials are used nationally, and there is no material related to local wisdom of the environmental culture around students, especially Jepara Regency. Needs analysis is used as the basis for developing textbook products. This initial research and information collection phase include analysis of teaching materials and thematic learning implementation at SDN 1, 2, 3, and 4 Banyuputih.

Based on the results of the analysis of the need for textbooks in the table above, it can be concluded that a companion book is needed. The book is a thematic textbook that contains local environmental conditions in the Jepara Regency area. The book is also expected to be able to hone students' higher-order thinking skills. Based on the student response questionnaire results, it can be seen that students gave a positive response to the teaching of HOTS-oriented textbooks based on local wisdom in the Jepara Regency that had been given. This is because, in textbooks based on local wisdom, students can learn material that is integrated with the environmental conditions around students. Socio-cultural conditions in the environment where students live and the school can support the delivery of material. Elementary school students will more easily understand the lesson if the explanation of the material is known and close to the students themselves.

The efficacy of textbooks is evaluated from two perspectives: student learning results utilizing local wisdom-based textbooks and student responses to the use of these textbooks in the learning process. Based on the foregoing test findings, it can be concluded that learning with HOTS-oriented thematic textbooks including local knowledge is beneficial in Jepara Regency. The experimental class achieved considerably superior learning outcomes than the control class ($p < 0.05$). The average learning results for the experimental class were 87.6, whereas the control class achieved an average of 73.8.

The learning outcomes of experimental class pupils who were taught using HOTS-oriented theme textbooks based on local wisdom in the Jepara Regency were superior to those of the control class, as determined by the learning effectiveness test. The adoption of well-structured HOTS-oriented theme textbooks based on local knowledge might make it simpler for students to absorb the information, hence facilitating their comprehension of the material. The findings of this study are supported by the research of Sulistyani and Deviana[18] that the HOTS Mathematics LKPD is oriented to the local wisdom of the city of Malang and was developed in a way that is valid, interesting, practical, and effective in assisting students in more meaningful mathematics learning that is integrated with their surrounding environment.

Since elementary school, these skills need to be trained to make students familiar with ways of thinking that will become learning capital at the next level of education. Local wisdom-based teaching materials that are developed can foster good values in students. This is because, through local wisdom in thematic textbooks, there will be social interaction among students in a cultural context so that students can learn and form a good understanding.

4 Conclusions

Based on the study results, it can be concluded that HOTS-oriented thematic textbooks based on local wisdom are declared feasible and can be used. This can be seen from the expert

validation, which states it is very good and positive responses from teachers and students. HOTS-oriented thematic textbooks based on local wisdom that have been developed are declared effective in improving student learning outcomes. This is evidenced by student learning outcomes in the experimental group which are better than the control class.

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